

THE QL REPORT

copyright 1986 Curry Computer

PO Box 5607 Glendale AZ 85312-5607

\$15.00 for 12 issues

1-602-978-2902

March 15, 1987

Vol. 3 No. 3

It looks like we will be going to the Computerfest in Indianapolis this year. The dates for the show are May 2nd and 3rd. We will be taking our whole point of sale system and doing invoices on it in the booth so stop on by and say hello. We are tentatively scheduled to give a seminar on our Point of Sale System on the QL.

The show will be held at the Holiday Inn-North, located just off I-465 on the Northside of Indianapolis. The mailing address of the Inn is 3850 Depauw Blvd., Indianapolis, IN 46268. The local phone number is 1-317-872-9790 and the tollfree is 1-800-HOLIDAY. Arrangements have been made for commercial rates for those attending the Fest. There will be a flat rate of \$52 per night but you must mention at the time you make reservations that you will be there for the Midwest Timex-Sinclair Computer Fest. The flat rate applies regardless of the number of guests per room.

There will be approximately 6000 square feet of exhibition space. There will also be two sets of lectures and seminars running concurrently. We will be exhibiting software for all Timex-Sinclair machines including the 1000, 2068, Spectrum and QL. The majority of the hardware will be for the QL. Our point of sale system will be in operation so those of you with an interest in database applications will be able to see how the program with its various procedures works.

Sir Clive is back in the news. A few weeks ago he released his new computer, the Z88, through a new company, Cambridge Computing Ltd. Weighing slightly less than 2 pounds, the Z88 comes with 32k of RAM, of which 10k to 15k is available to the user. The storage medium is in either RAM cartridges or solid-state EPROMS much like the ones used in Psion's Organizer. These plug in cartridges now hold between 32k and 128k of additional storage but Sinclair says that soon a 1Mb cartridge will be available. Since the machine has 3 slots available for storage, this means that the Z88 will be capable of storing over 3Mb of instantly addressable memory. The RAM cartridges are not powered externally and would lose all data if removed from the machine. As long as they remain plugged in memory is preserved even when the machine is turned "off".

The EPROM cartridges store data permanently. These can also be used for solid-state software. An optional UV eraser for the EPROM is available so they can be reused once the information stored is no longer needed.

For a suggested retail of approximately \$300.00, you get 32k RAM built-in, expandable to 416k immediately by solid-state plug in RAM cartridges. Spreadsheet, word-processing, database-management,

calendar, diary, calculator, and telephone-list software with real-time clock and alarm are also included. You can be working on the spreadsheet, insert text from the WP, or insert arithmetic calculations from the SS into the WP-they are totally integrated. You also can be working on the spreadsheet and, without having to stop and save your work, go into the diary to enter or check an appointment and then go back to the SS and be right where you left off. That aspect sounds something like multi-tasking on the QL with CHOICE. An advanced 80 character by 8 line display has a unique dynamic full page screen map. The full-size QWERTY keyboard is virtually silent. The whole unit measures only 11 1/2" x 8 1/4" by 7/8" and weighs under 2 pounds. The machine is IBM compatible to the extent that you can transfer files from the Z88 to an IBM and vice versa.

We will be giving more information on this new Sinclair computer later. It will be interesting to see if it will be "QL compatible" or not. The basic is a variation of "BEC Basic" and the word-processor is not by Psion so we don't think it will be but you never know.

John Juergens of Pacifica California wrote us about a problem he had with the microdrives on his QL. What he discovered is interesting and we print below excerpts from his letter:

"..At times mdv1_ was making available over 15 more sectors than was mdv2_; a disparity that required all formatting to be done on mdv2_ unless one wished to risk an 'I/O Failure' when running the cartridge on mdv2_... The disparity continued and I had just about formed the habit of NEVER changing drives, i.e., always format on mdv2_ and never run a program on one drive that had been saved on the other. In reality, mdv1_ would always run an mdv2_ SAVED program but the converse could not be relied upon.

In that the tape in any particular cartridge is a definite length, differences in sectors available after formatting first on one drive and then the other, simply had to be due to faster and slower drive speeds: The greater number of sectors available had to translate to a slower drive speed and vice versa. In my case, mdv1_ was running slower by 15 or more sectors, if one may put it that way.

Today I was overpowered by curiosity; and, I took the lid off. What I found (eventually) was that the rubber grommet on the mdv1_ drive spindle had worked itself up or, in the alternative, never had been properly placed to begin with, to the point that it was rubbing on the top of the case and had, in fact, buffed off a thousandth or two of the top of the case. It had chewed through the metalized coating and was working into the plastic.

The remedy was to push it back down on the spindle to equal the depth of its counterpart on mdv2_. A series of 'Formats', first on one drive and then the other, told the story. The 15 plus sector difference between the drives had been reduced to 5. Mdv1_ is still the slower drive.

My next concern was: Now, what about all of those programs that I have done on and run on Mdv1_. Will those STILL run or can I

expect 'I/O failure' reports now that mdv1_ is back in the land of the living running 10 sectors faster than it did? Will I somehow have to figure out a double-COPY system in order to redo all of those programs?

...Admittedly, insufficient testing has thus far produced only favorable results- so, I am hopeful... It is my thought that the above might be of some value to you or your newsletter readers who might have experienced a similar problem.

What I would really like to know is what is the amount of tolerance acceptable as between the drives. I know that mine balked at a fifteen sector discrepancy- but NOT always, just occasionally. I am wondering what might be a 'guaranteed' acceptable differential?"

Along these same lines, a source we have in England says:

"I have already discovered that the difference in the number of sectors available when a cartridge is FORMATTed is due to their being two different size rubber rollers as well as a difference in the ROM. The JS ROM has all the operating system in the 32k ROM chip leaving the 16k ROM chip available for changing to accomodate different languages (Swedish, German, etc.)."

HIDDEN FILE

===== by Marshall Stiles, 2/87

One day while doing some chores on the QL I saved a file, but I actually made a mistake. In haste I forgot to include the name of my file. When I realized this, I had already pressed the ENTER key. To my amazement, the computer went right on and saved my file. My curiosity was now pricked for sure, so I got a directory with the "dir mdv1_" command. No file appeared on the screen, only the usual message about sectors and the drive label. What happened to my file? Well, some experimenting soon revealed that my file was stored on the microdrive. To load it back I typed "load mdv1_" and pressed ENTER. When I asked for a listing with the LIST command, there it was. I had inadvertently created a file which did not appear in the directory and for all intents and purposes could be considered "hidden".

If you want to try this, I suggest you try a blank, formatted drive cartridge. For some reason it does not always work on cartridges with files already stored on it. New cartridges have given me no problem.

Try this... Type in this short program: 100 print "HIDDEN FILE"
Now save the one line program with no name (SAVE MDV1_). Make sure you have a blank, formatted cartridge in microdrive one.

Finally save this line: "100 LRUN MDV1_" under the name "boot". In other words "SAVE MDV1_BOOT".

To test it remove the cartridge, reset your machine, place the cartridge back in MDV1_ and press F1 or F2. If the experiment works, our computer should load and execute the boot program which should, in turn, load and execute your hidden program. "HIDDEN FILE" should

appear on the screen.

//

As promised , below is the completion of the QL hardware article we started in last month's issue. As you will be able to tell, the article is very British, especially with references to the "dongle" which was on very early QL's and replaced almost immediately with built-in ROM. Any of you who would like to purchase the test cartridge can either send us a blank formatted cartridge and \$1.00 or \$3.50 for a cartridge and program.

MODIFICATIONS

1. The work involved in having your clock running continuously is quite small and fairly easy. If possible check the current consumption which should be less than 2 microamp with the mains power OFF. If the consumption is much greater then examine the back of the board for a resistor which should not be there.

If the clock does not work from a battery, check for continuity between the battery and the chip. It is not unknown for tracks having been cut. (Devon Klofta phoned us recently and said he did the battery backup but it only works about 60% of the time. If anybody has done this and has it working more reliably than this please write to him. His address is: 1714 Georgia, Toledo, OH 43613).

2. Some QL's have 33K resistors soldered to pin 21 & 19 of the 8302 then connected to -12 volts. Some machines don't have them and some have different value resistors. It is a nifty piece of soldering but the manual states it is mandatory. It looks to me that the factory have never read the manual.

3. Own up all those who kept the dongle!. Now is the time to put it to good use by opening it up to reveal a 16K EPROM. Have the EPROM reprogrammed with what you need then insert it in the socket you have soldered into the vacant location at the side. If a switch is used to pull the appropriate chip select line low, then two EPROMS can be used but only one at any one time.

Semiconductor	Function	Issue 5	Issue 6
74LS00	2-in NAND Gates	*	*
74LS03	3-in NAND Gates	*	*
74LS245	Bus-transceiver	*	*
74LS257	Address Multiplexer	*	*
7805	5v Regulator	*	*
7812	12v+ Regulator	*	*
7912	12v- Regulator	*	*
HAL 16L8	Hard Array Logic	-	*
MA 8049	Peripheral controller	*	*
MC 1377P	PAL/TV Signal Generator	*	*
MC 68008	Central processor	*	*
SN 1488	RS 232 Buffer	*	*
SN 1489A	RS 232 Buffer	*	*
ZX 8301	ULA Controls display	*	*

Test Program

The test program on the cartridge needs SER1 and SER2 to be linked so that the QL can talk to itself which is the most comprehensive of the systems tests. If the ports are not linked then type GOTO 4480 to carry on.

The memory test is very detailed running as a job but it takes a very long time to complete. A QL with the full 512K of extra memory will take about two and a half hours. Watching it is as interesting as watching paint dry but it is great as a demonstration for non-computer people. If you put a tiny bit of something in memory it indicates it in the BAD window.

If free_mem from Toolkit II or better still Free_memory from Supercharge or the memory test indicate faulty chips then put a good memory chip in a test clip and put it over each chip in turn. Power down between each test or the results will not be meaningful.

//

We have a letter from a very "cosmopolitan" gentlemen we quote from below:

"I was a QL retailer in New Zealand, but now am a diplomatic 'house-husband' in Mexico, a rather agreeable situation I might add!

I have a 'JM' QL with Cumana 3 1/2" disks and interface (with additional ramdisk software and toolkit commands). The disks are also used on my 48k Spectrum...

I look forward to the arrival of a MIDI interface for the QL, and also PCB design software. Also an add-on/replacement keyboard would be a desirable accessory too!

I would be obliged if you would mention my existence, in QLR, and also my interests in QL hardware, MIDI computer music, and general technical subjects. I am 29, and a telecoms technician.

I have a brand new, unused Sinclair "Integrated Accounts", value \$149.95, which in my new circumstances is no longer required. If possible I would like to exchange this for the DP 'Supercharge'.. Also, would you tell me if you know of any other QL enthusiasts living in Mexico!"

Geoff Wood
Andres Bello 23, Piso 6,
Polanco,
11560, Mexico DF,
MEXICO

Jerry LaFountain of Eugene Oregon has a short little program that deals with error trapping. He writes:

"Error trapping has always been a weak point for the SuperBasic language and an extraordinary omission for programmers to work around. However, while messing around the other evening I lucked onto some undocumented keywords which seem to implement full error-handling (see below).

The keywords WHEN ERROR/END WHEN work on my QL. When used with RETRY/CONTINUE/GO TO, programs can be written which will gracefully handle user errors such as entering an alpha character into a numeric variable in my demo program.

Now if someone can come up with some PEEK locations to identify the error, we will really be downtown! If everyone already knows about these keywords, I apologise for wasting your time..."

```
10 CLS
20 WHEN ERROR
30   PRINT "You must input a numeric value!--try again:"
40   RETRY
50 END WHEN
60 REPEAT guess
70   INPUT "Input number: ";num
80   PRINT "Your number is ";num
90 END REPEAT guess
//
```

Alphonso Feng needs help in setting up his Olivetti PR2300 printer with QUILL. If anyone can help him his address is : 550 Chestnut Street #221, Winnetko, IL 60093.

Ed Galicki has written some educational programs for pre-schoolers on the QL. He writes:

"I thought if there were any users out there who had children at the age of learning either counting or arithmetic, maybe they would be interested...I would be willing to copy these or other programs onto a microdrive cartridge or 720k disc(5 1/4 DSDD) if you send the disc or cartridge and pay the postage, I'll give the programs free of charge for now..."

I have also written a program in basic to calculate the amount of each of my mortgage payments that is interest. The interest is totalled by each year..."

Ed's address is: 5121 Muir Ave. #2, San Diego, CA 92107

We finally have back in stock The QDOS Companion by Andy Pennell and Inside The QL by Naylor and Rodgers. The former is generally regarded to be the best book currently available on QDOS. If you want to program in machine code then this is the book for you. Each system call is covered and is described not only in terms of its function and its use but also in the exact steps it takes when carrying out its

task. Multi-tasking is given excellent coverage in this book. The second book is an introductory guide to the hardware side of the QL. The first part of the book describes the fundamental principals behind computer design. The second half covers the QL in particular, how it is structured. The price for each book is \$12.95 .

We have received TASKMASTER and are quite impressed with the program. It allows multi-tasking (the Psion programs as well as any executable file) and has the additional feature of being able to let you quit into SuperBasic and then go back to the task you were working on. A simple calculator is available and one of the nicer features, small that it is, allows the screen to go blank after ten minutes of non-use on the keyboard. Or, you can set a time less than that. To activate the screen again all you do is press any key. A minimum of 256k is required and obviously 512k is better. The program is supercharged and is quite fast in its execution.

PCB1

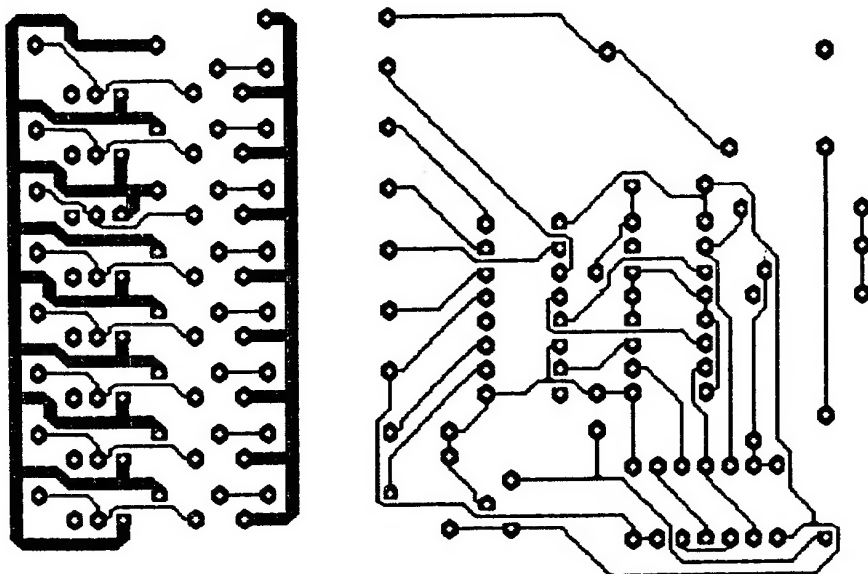
=====by Scott Calkins

The first of the two printed circuit board designers by Talent has arrived, and it was worth the wait. PCB1 is billed as a single sided circuit board designer with camera ready output and an auto-routing function.

The program does not require any extra memory and works with most printers and interfaces. We used both an Epson printer and the QL printer, and both worked without any problems.

One of the first things you notice when you get the program, is that there are very few pages to the manual. The reason for this is that it is a very simple program to use. I felt comfortable with it in less than half an hour. Included is a demo board, with step by step instructions on how it was produced(see below).

The program will handle a board up to 100mm X 160mm. This incidently is what they mean by EuroCard Standard. The program comes with a library of components, or you can design your own if the ones you want are not included.



To design a board, you first load in the library of parts. You then can drag the parts to where you want them, and lock them into place. You then must label all of the connection points, i.e. IC 1, pin 1 or C4, pin 2. Once you do this, you are ready to route the board.

The auto-routing function of the program is the most powerful. The sample board took two passes of the router, at about 25 seconds per pass. Telling the computer what connections you want, is simple. As an example, you type, IC1, pin2 to C3, pin1. You just list all of the connections you want, and then let the router do the rest. The program allows you to have two sizes of traces, and manually route if needed.

When you are finished with the board, you can print the traces, silk screen pattern, parts list, or a list of all connections. The program prints fine on the Sinclair printer and on any Epson FX80 compatible printer.

This program will be one of the best for 1987. Anyone with a basic knowledge of pcb layout will be able to use this program. The only serious drawback is the fact that it only allows for single-sided boards which limits its usefulness here in the States to a certain degree. Practical applications of PCB1 would include amplifier circuits, or any light-density circuits. Most people who are designing boards for their own use and not for commercial purposes, will probably be interested in this program. I hope to review the PCB2 program in a future issue of QLR so watch for it.

We have just received STRIP POKER from Talent. Denise, as she is called, is... a very good player. There is not much you can say about a program like this. Graphics are good and the program does ask you on power up whether you are using a monochrome or color monitor. The top half of the cards are displayed on the bottom of the screen.

For those of you who want to save a little money on microdrive cartridges, we have "used" ones from Psion. They are early versions of the business programs and have the write-protect tab broken off. All you have to do is put a piece of scotch tape over where the write-protect tab used to be and reformat them and they work fine. Cost is \$6.95 for four.

Next month we will be reviewing PCB2 by Talent and BASIC-ALLY, also by Talent. We should have Pyramide's new Vegas games package and some other new programs.

Until next time, enjoy your QL.